

**Male and female patients >50 yrs who have sustained a low trauma fracture (from standing height or less) \***  
*GP to be resident in Oldham PCT. Patients identified from Accident and Emergency databases.  
 Referrals can be accepted from other services. Eg vertebral fractures who attend GP*

- Women 50 to 75 yrs
- All men over 50

- Females >75 yrs

- Patient Questionnaire (results of questionnaire must meet criteria \*)
- Letter to GP re: patients fracture

- Letter to GP and Patient
- Calcium and vitamin D3
- Bisphosphonate (if able to tolerate)

**DEXA**

**Women 50+ yrs**  
**T score > -1.0**  
**Normal**

- Lifestyle advice

Results to be communicated in writing to GP and patient

**Women 50+ yrs**  
**T score -1.0 to -2.5**  
**Osteopaenia**

- Lifestyle advice
- Calcium & Vit D3
- Rescan 3 years

Results to be communicated in writing to GP and patient

**Women 50 to 64 yrs**  
**T score -3.0 OR**  
**T score -2.5**  
 plus additional risk factor

- Calcium D3
- Bisphosphonate
- Lifestyle advice
- Bloods
- Refer Rheumatology Team if T score <-3.5

Results to be communicated at clinic appointment, letter to GP

**Women 65 to 74 yrs**  
**T score < -2.5**  
**Osteoporosis**

- Calcium D3
- Bisphosphonate
- Lifestyle advice
- Bloods
- Telephone follow up in 3 months
- Refer Rheumatology Team if T score <-3.5

Results to be communicated at clinic appointment, letter to GP

**Male 50+ yrs**  
**T score >-1.5**

- Lifestyle advice

Results to be communicated in writing to GP and patient

**Male 50+ yrs**  
**T score < -1.5**

- Calcium D3
- Bisphosphonate
- Lifestyle advice
- Bloods
- Refer Rheumatology Team

Results to be communicated at clinic appointment, letter to GP

**Bisphosphonates** and calcium and vitamin D supplementation will be first line therapy unless unsatisfactory response or intolerance.

- An unsatisfactory response occurs when there is another fragility fracture despite adhering fully to treatment for 1 year and there is evidence of a decline in BMD below their pre-treatment baseline. (NICE 2005)
- Intolerance of a bisphosphonate is defined as oesophageal ulceration, erosion or stricture, or lower gastrointestinal symptoms, any of which warrants discontinuation of treatment with (NICE 2005)

**\*Excludes:** patients diagnosed with Osteoporosis or had DEXA performed in the last 12 months. Fractures sustained in RTA, assault, fall from above head height. Fracture sites to be excluded: head, face, nose, mouth, jaw, finger, thumbs, foot and toe. Exclude patients suffering with dementia, chronic confusion and lack a home carer or unable to attend DEXA (Calcium and vitamin D supplements should be commenced).

**Recommendation for calcium and vitamin D supplementation**

**Recommendation**

Prescribers are requested to be proactive in offering calcium and vitamin D supplementation for patients at risk of Osteoporosis and fracture.

It is recommended that calcium and vitamin D should be considered for all:

- female and male patients in nursing and residential homes
- female and male patients who are housebound
- patients already receiving a bisphosphonate for treatment of Osteoporosis (unless clinicians are confident that patients have an adequate intake).

**Rationale**

Standard six of the National Service Framework for Older People 2001 suggests that as a PCT we should take action to prevent falls and their impact through prevention and treatment of Osteoporosis.

The Royal College of Physicians guidelines 2000 and the National Service Framework 2001 recommend that older people who are frail or housebound may benefit from calcium and vitamin D to help prevent hip fractures.

Chapuy et al 1992 performed the main study to support this, which concludes daily supplementation of 1.2g of calcium and 800iu of vitamin D3 reduces the risk of hip fractures and other non vertebral fractures amongst elderly women.

**Preparations available:**

Preparation	Form	Calcium Content	Vitamin D (colecalfiferol) content	Dose	Cost 28 days
Adcal - D3 ®	Chewable Tablets	600mg (15.1mmol)	10 micrograms (400 units)	One tablet twice daily	£4.06
Calfovit D3 ®	Powder in sachets	1200mg (30mmol)	20 micrograms (800 units)	One sachet daily	£4.03
Calcichew ® D3 Forte	Chewable tablets	500mg (12.6mmol)	10 micrograms (400 units)	One tablet twice daily	£4.20
Calceos ®	Chewable tablets	500mg (12.6mmol)	10 micrograms (400 units)	One tablet twice daily	£4.42
Cacit ® D3	Effervescent granules	500mg (12.6mmol)	11 micrograms (440 units)	One sachet twice daily	£9.99

**Considerations**

Hypercalciuria, hyperparathyroidism, hypercalcaemia and renal failure.

**References**

- Chapuy MC, Arlot ME, Duboeuf F, Brun J, Cruzet B, Arnaud S, et al. 1992 Vitamin D and calcium to prevent hip fractures in elderly women. *N Engl J Med*;327: 1637-1642  
DOH 2001 National Service Framework for Older people  
MIMS March 2005  
Royal College of Physicians 2000 Osteoporosis-Clinical guidelines for the prevention and treatment

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